Applicants: John W. RAPP et al.
Filing Date: January 18, 2002

Application No.: 10/052,744
Attorney Docket No.: 1934-001-05

REMARKS/ARGUMENTS

Claims 2-22 and 29-37 are currently pending in the present patent application.

The Rejections Under 35 USC § 103

In the Office Action mailed October 25, 2010, the Examiner rejects claims 2-22 and 29-37 under 35 USC § 103(a) as being unpatentable over US Patent No. 5,469,361 to Moyne (hereinafter "Moyne") in view of US Patent Publication No. 2005/0097577 to Mathur (hereinafter "Mathur"). The Examiner cites Moyne for disclosing all elements of the claims, including independent claims 5, 12, and 29, except for the self-configuration interface system utilizing "the retrieved interface configuration information to facilitate communication between the hardware subsystem and the self-configuring application services system via a selected one of the plurality of communication protocols." See page 4 of the Office Action. The Examiner points to Mathur for disclosing this element, citing paragraph 0093 of Mathur in particular.

Claim 5

Claim 5 recites, in part, a self-configuring application services system, a signal database storing interface communications configuration information corresponding to a manner of managing communication between the hardware subsystem and the self-configuring application services system via a plurality of communication protocols, and a self-configuring interface system coupled to the hardware subsystem and the application services system and comprising an interface system configuration module coupled to retrieve interface configuration information from the signal database and utilizes the retrieved interface configuration information to facilitate communication between the hardware subsystem and the self-configuring application services system via a selected one of the plurality of communication protocols. The interface system configuration module retrieves interface configuration information from the signal

database and uses this information to facilitate communications through a selected one of the plurality of communication protocols.

The Mathur publication is directed to an application program interfaces (APIs) that provide a way for a computer application to interface with various components of an operating system and input/output devices in a resource-limited environment. See Abstract and Figure 3. Operating systems provide application programs with access to a wide variety of operating system functionality through the APIs. Figure 2 illustrates an operating system including a device manager 210 that performs a number of tasks, including finding the appropriate device driver by obtaining a Plug and Play identification or by invoking the detection routine to find the driver that can handle the device. See paragraph 93. Using the identification or driver determined via the detection routine the device driver is then installed so the device can communicate with other components in the operating system 200 (see Figure 2). Paragraph 96 and 97 discussed that the installable device drivers 204 can exist is standalone dynamic link libraries (DLLs) or utilize a common interface by which their services are exposed to applications (Stream I/O Interface).

In the approach of Mathur the environment includes components or devices that communicate with other devices in the system in the system through pre-established communications protocols. For example, in the computer system of Figure 1 various components are connected to system bus 23 and communicate with each other via the system bus according to an established communications or bus protocol. The Plug and Play feature mentioned in paragraph 93 of Mathur does not configure the device with drivers that facilitate communications by the device through a selected one of the plurality of communication protocols. No such plurality of communication protocols is contemplated by Mathur or the Plug and Play approach, which instead assigns parameters such as memory addresses, interrupt request, and direct memory access parameters associated with the device driver to enable the corresponding device to communicate over the associated bus. Devices communicating through different

communications protocols are not added to and simultaneously utilized in the system with the approach of Mathur.

For these reasons, the combination of elements recited in claim 5 is allowable. Dependent claims 2-4 and 6-11 are allowable for at least the same reasons as claim 5 and due to the additional elements added by each of these dependent claims.

Claim 12

Independent Claim 12 recites a system including a hardware subsystem, an application database referencing a first software object that corresponds to a manner of processing information associated with an electrical signal. A self-configuring application services system includes a configuration module coupled to the hardware subsystem and is coupled to retrieve application service configuration information from the application database, and includes the first software object.

Additionally, a signal database stores communications protocol interface configuration information corresponding to a manner of managing communication between the hardware subsystem and the application services system via a plurality of communication protocols and references a second software object that corresponds to a manner of processing information associated with an electrical signal and associate an event code with the electrical signal.

Additionally, a self-configuring interface system is coupled to the hardware subsystem and the application services system and includes a configuration module coupled to retrieve the second software object and retrieve interface configuration information from the signal database to facilitate communication between the hardware subsystem and the self-configuring application services system via a plurality of communication protocols.

Once again, the plug And Play approach of Mathur does not contemplate storing communications protocol interface configuration information associated with a plurality of communications protocols but only involves parameters that enable a

device to communicate through a predetermined communications protocol with other devices in the system.

For these reasons the combination of elements recited in claim 12 is allowable. Dependent claims 13-22 are allowable for at least the same reasons as claim 12 and due to the additional limitations added by each of these dependent claims.

Claim 29

Independent Claim 29 recites a method for processing electrical signals in a system including a hardware subsystem that includes a set of components adapted to carry electrical signals, each electrical signal associated with one from the group of a sensing operation and a control operation. The method includes retrieving application service configuration information that associates a first set of software objects with at least one electrical signal and retrieving the first set of software objects in accordance with the application service configuration information.

The method further includes determining a required communications protocol from a plurality of communication protocols and selecting a communications protocol and retrieving communications interface configuration information that corresponds to the hardware subsystem and which associates a second set of software objects with at least one electrical signal and automatically generating a hardware interface for managing communication between the software object and the hardware subsystem in accordance with the communications interface configuration information, the interface including associating an event code with each electrical signal.

Moyne and Mathur fail to teach or suggest selecting and retrieving communications interface configuration information based on selecting a communication protocol from a plurality of communication protocols. Instead, the Plug and Play configuration of Mathur configures devices and installs required device drivers to enable the devices to communicate through a predetermined communications protocol utilized in the system of Mathur.

Applicants: John W. RAPP et al.
Filing Date: January 18, 2002

Application No.: 10/052,744
Attorney Docket No.: 1934-001-05

For these reasons, the combination of elements recited in Claim 29 is allowable and dependent claims 30-37 are allowable for at least the same reasons as Claim 29 and due to the additional elements added by each of these dependent claims.

Conclusion

The present patent application is in condition for allowance. Favorable consideration and a Notice of Allowance are respectfully requested. **Should the Examiner have any further questions about the application, Applicants respectfully request the Examiner to contact the undersigned attorney at (425) 732-4624 to arrange for a telephone interview to discuss the outstanding issues.** The Commissioner is hereby authorized to charge any deficiency of fees submitted herewith, or credit any overpayment, to Deposit Account No. 07-1897.

Respectfully submitted,
GRAYBEAL JACKSON LLP

/Paul F. Rusyn/

Paul F. Rusyn
Registration No. 42,118
Attorney for Applicants
400 – 108th Avenue NE, Suite 700
Bellevue, WA 98004-5562
(425) 732-4624 Phone
(425) 455-5575 Fax